

REMARKS

Claims 1-26, 31 and 32 were pending in the application at the time the present Office Action was mailed, claims 14-20, 31 and 32 having been withdrawn from consideration pursuant to an earlier Restriction Requirement. No claims have been cancelled by the present response, and new claims 33-37 have been added. Accordingly, claims 1-13, 21-26 and 33-37 are currently under consideration in the present application.

Claims 1-13 and 21-26 were rejected in the present Office Action. More specifically, the status of the claims in light of the present Office Action is as follows:

(A) Claims 1-13 and 21-26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's Admitted Prior Art as set forth in paragraphs 2-6 and Figures 1 and 2 of the present application (hereinafter referred to as "AAPA").

The undersigned attorney wishes to thank the Examiner for engaging in a telephone conference on May 24, 2005 to discuss the present Office Action. During the course of the telephone conference, the undersigned attorney and the Examiner discussed the basis of the present obviousness rejections. Specifically, the undersigned attorney noted a number of reasons why it would not have been obvious to one of ordinary skill in the art at the time of the invention to modify AAPA to arrive at the claimed invention. The following remarks summarize the points raised during the May 24 telephone conference.

A. Response to the Section 103 Rejection of Claims 1-13 and 21-26

Claims 1-13 and 21-26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the AAPA.

1. Independent Claims 1 and 21 Include, *Inter Alia*, a Unitary Fitting Configured to Transfer at Least Approximately All of the Primary Loads From an External Structure to a Wing of an Aircraft

Independent claims 1 and 21 each include, *inter alia*, a unitary fitting for attaching an external structure to a wing. In claim 1, for example, the unitary fitting is configured to transfer at least approximately all of the primary loads from the external structure to

the wing. The primary loads include pitch loads and side loads. The unitary fitting includes a first portion and a second portion. The first portion has at least a first attached feature and the second portion has at least a second attached feature spaced apart from the first attached feature. The first attached feature is configured to transfer at least a portion of the pitch loads from the external structure to the wing. The second attached feature is configured to transfer at least a portion of the side loads from the external structure to the wing.

Independent claim 21 includes features at least generally similar to the features of claim 1 discussed above.

2. AAPA Cannot Support a Proper Section 103 Rejection of Independent Claims 1 and 21 For at Least the Reason That It Would Not Have Been Obvious to One of Ordinary Skill in the Art at the Time the Invention Was Made to Form the Separate Pieces of AAPA as One Unit

Independent claims 1 and 21 include, *inter alia*, a unitary fitting having a first attached feature spaced apart from a second attach feature. The first attach feature is configured to transfer at least a portion of the pitch loads from an external structure to a wing. The second attached feature is configured to transfer at least a portion of the side loads from the external structure to the wing.

In rejecting claims 1 and 21, the Office Action relies solely on AAPA. However, the Office Action acknowledges that AAPA fails to teach or suggest "that the fitting is unitary." To overcome this deficiency, the Office Action makes the unsupported assertion that "it would have been obvious to ... have [made] the fitting of AAPA as one unit, since it has been held that forming in one piece/unit an article which has formerly been formed in two pieces and put together involves only routine skill in the art." (Office Action at page 3).

The applicants respectfully disagree with this unsupported assertion for a number of reasons. First, it would not have been obvious to one of ordinary skill in the art at the time the invention was made to make the separate fittings of AAPA as one unit because of the manufacturing problems this approach would have presented. As shown in prior art Figure 2, the prior art wing 104 is a large structure made up of multiple individual

pieces including, for example, the wing front spar 211, rear spar 212, wing ribs, wing skins, etc. Because of manufacturing tolerances, the interface mounting points for the engine strut 110 vary slightly from wing to wing. To overcome this problem, the AAPA used separate attach fittings to mount the engine strut 110 (i.e., the side load fittings 224 and the pitch load fittings 221 of Figure 2). The separate fittings could "float" relative to each other when being attached to the wing, and were drilled after installation to ensure proper alignment. It would not have been obvious to make the separate fittings of AAPA as one because a single fitting would not have fit properly to every wing assembly.

Second, the applicants respectfully reject the assertion that the present invention is nothing more than "forming in one piece/unit an article which has formerly been formed in two pieces and put together. . ." The applicants reject this assertion because the separate fittings of AAPA (i.e., the side load fittings 224 and the pitch load fittings 221 of Figure 2) were never "put together" as the Office Action asserts. In contrast, as Figure 2 clearly illustrates, these fittings were always spaced apart from each other and physically attached to different parts of the aircraft wing 104. Therefore, the Office Action has misapplied the holding that forms the basis of this obviousness rejection because it has mischaracterized the fittings of AAPA as being "formed in two pieces and put together." More to the point, because the fittings of AAPA were always separate (both spatially and physically) from each other, it would not have been obvious for one of ordinary skill in the art at the time of the invention to modify AAPA to arrive at the invention of claims 1 and 21.

Third, in Section 2144.04, the MPEP discusses the requirements for an obviousness rejection based on "making integral." In this section, the MPEP states that the court has affirmed an obviousness rejection when the claim was directed to a "brake drum integral with a clamping means, whereas the brake disk and clamp of the prior art comprise several parts rigidly secured together as a single unit." (Citing *In re Larson*, 340 F.2d 965, 968, 144 U.S.P.Q. 347, 349 (CCPA 1965); emphasis added). As this passage makes clear, the court has upheld such an obviousness rejection only when the prior art disclosed parts that were rigidly secured together as a single unit. In the present case, however, the separate fittings shown in prior art Figure 2 are not "secured

together as a single unit." In contrast, they are secured to separate areas of the aircraft wing, and do not even touch each other directly. Therefore, the Office Action has misapplied the holding from *In re Larson*.

Fourth, the obviousness rejections of claims 1 and 21 are based solely on an alleged holding that "forming in one piece/unit an article which has formerly been formed in two pieces and put together involves only routine skill in the art." However, the Office Action fails to provide the applicants with a cite to this holding. Absent this cite, the applicants cannot review the context of the holding to distinguish the relevant facts. Accordingly, if the Examiner elects to maintain these rejections, the applicant respectfully requests that the Examiner provide a cite to the holding which forms the basis of the rejections.

For at least the reasons set forth above, AAPA cannot support a proper Section 103 rejection of independent claims 1 and 21. Therefore, the rejections of claims 1 and 21 should be withdrawn.

Claims 2-13 depend from base claim 1, and claims 22-26 depend from base claim 21. Accordingly, the AAPA cannot support a proper Section 103 rejection of dependent claims 2-13 and 22-26 for at least the reason that this reference cannot support a proper Section 103 rejection of corresponding base claims 1 and 21, and for the additional features of these dependent claims. Therefore, the rejection of dependent claims 2-13 and 22-26 should be withdrawn.

The rejection of dependent claim 6 should be withdrawn for at least one additional reason. The Office Action acknowledges that AAPA fails to teach or suggest that the third and fourth bores of claim 6 are at least generally aligned along a common access. To overcome this shortfall, the Office Action goes on to assert that "it would have been an obvious matter of design choice wherein no stated problem is solved, or any new or unexpected result achieved to have the third and fourth bores aligned along a common access versus the third and fourth bores aligned in different axes as taught by AAPA." (Office Action at page 4).

The applicants respectfully disagree with this unsupported assertion for a number of reasons. First, the Court of Appeals for the federal circuit has clearly stated that the Examiner must provide sufficient reasoning to substantiate the claim of obvious design choice. (See, e.g., *In re Chu*, 66 F.3d 292, 36 U.S.P.Q.2d 1089 (Fed. Cir. 1995)). In the present case, the Examiner has not provided any reasoning as to why the claimed features are a matter of design choice and are therefore obvious. All the Examiner has stated in this regard is that "no stated problem is solved, or any new or unexpected result achieved." The applicants would like to respectfully point out, however, that the applicants are under no obligation to state a problem that is solved, or to state any new or unexpected result achieved, because this is not the legal standard for obviousness. As is well known, the legal standard for obviousness is "whether the claimed subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art."

The Examiner goes on to state "one of ordinary skill in the art would have expected applicant's invention to perform equally well with the third and fourth bores aligned in different axes." Again, whether "applicant's invention performs equally well" is not the standard for a proper obviousness rejection under Section 103. Further, the Examiner provides absolutely no support for the assertion as to what one of ordinary skill in the art "would have expected." Therefore, AAPA cannot support a proper Section 103 rejection of claim 6 for the additional reason that the Office Action has failed to provide sufficient reasoning to substantiate the assertion that claim 6 is an obvious design choice. Therefore, the rejection of claim 6 should be withdrawn for at least this additional reason.

The rejections of dependent claims 10-12 should be withdrawn for at least one additional reason. These claims are directed to the aircraft system of claim 1, and further recite that the external structure includes a fuel tank, a weapons systems, and a cargo hold, respectively. The Office Action acknowledges that the AAPA fails to disclose these features. To overcome this shortfall, the Office Action goes on to suggest, however, that "it is notoriously well known in the art of aircraft to provide such external structure in order to realize the benefits thereof . . ." (Office Action at page 5). Even accepting this as true (and applicants expressly do not), this assertion still fails to

provide any explanation as to why one of ordinary skill in the art at the time of the invention would have chosen to attach such external structure to a wing in the manner of claims 10-12. Simply reciting the existence of a particular external structure cannot reasonably be construed as also providing the motivation to combine that structure with AAPA to somehow arrive at the claimed invention. Therefore, the rejection of dependent claims 10-12 should be withdrawn for at least this additional reason.

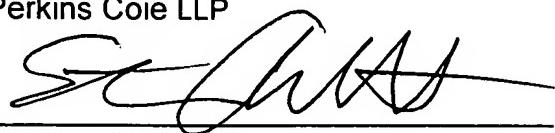
3. New Claims 33-37

New claims 33-37 have been added by the present amendment. Claims 33-35 depend from base claim 1, and include features illustrated and described in the present application. Claim 33, for example, is directed to the aircraft system of claim 1 and further includes a first structural member extending between the external structure and the first attached feature, and a second structural member spaced apart from the first structural member and extending between the external structure and the third attached feature. New claim 35 is directed to the aircraft system of claim 1, and further includes a first pin coupling the external structure to the first attached feature, and a second pin coupling the external structure to the third attached feature. Claims 36 and 37 depend from base claim 21, and include features illustrated and described in the present application. Nowhere does the applied reference teach or suggest the features of new claims 33-37. Accordingly, claims 33-37 are in condition for immediate allowance.

In view of the foregoing, the pending claims comply with 35 U.S.C. § 112 and are patentable over the cited art. The applicant accordingly requests reconsideration of the application and a Notice of Allowance. If the Examiner has any questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call the undersigned at (206) 359-6351.

Respectfully submitted,

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